NC/QC/YD/2020-21/P7-C1

Date: 26-09-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**154 min**	Shall not be less than 30 min
2	Final setting time	**260 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.14%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.09 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.64 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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ಜ.ಪ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P7-PCC1 **Date: 26-09-2020**

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	100.00	85-100	90 – 100
20mm	64.75	0 -20	30- 70
10mm	32.50	0 -5	10- 35
4.75mm	4.05	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.35	90-100	90-100	90-100	The Sample Conforms to Grading Zone-II
02.36	82.05	60-95	75-100	85-100	
01.18	70.45	30-70	55-90	75-100	
600.mic	47.80	15-34	35-59	60-79	
300.mic	24.55	5-20	8-30	12-40	
150.mic	6.25	0-10	0-10	0-10	

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P7-C2 **Date: 28-09-2020**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**158 min**	Shall not be less than 30 min
2	Final setting time	**260 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.11%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.07 mm**	Shall not be more than 10 mm
5	Compressive strength b) 3 days (average of three results)	**28.74 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P7-CA2 **Date: 19-10-2020**

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.

{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	20 mm Sample	Single size	Graded
40 mm	**100.00**	100.00	100.00
20 mm	**95.25**	85-100	90 - 100
10 mm	**48.10**	0 - 20	25 - 55
4.75 mm	**3.95**	0 - 5	0 - 10

TABLE 1. 2 :

SL No	Test conducted	Results	**Requirements** as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	**26.54%**	Not to exceed 25 %
2.	Crushing value	**28.93%**	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P7-BC3 Date: 08-11-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.43%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.25**	90-100
9.5	**82.10**	70-88
4.75	**64.35**	53-71
2.36	**51.80**	42-58
1.18	**43.35**	34-48
0.600	**32.75**	26-38
0.300	**26.55**	18-28
0.150	**17.10**	12-20
0.075	**8.30**	4-10

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P7-BS3 Date: 08-11-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Asphalting and Improvements to roads & drains at A Sector, B Sector, Judicial Layout, Someshwaranagara in ward no.04 of Yelahanka Satellite town sub Division (Package -07).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1356**	900
2	Marshall Flow at 60°C, mm.	**3.44**	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

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